

## **REMARKS/ARGUMENTS**

This application has been carefully considered in light of the non-final office action mailed December 21, 2006. As a result, minor amendments have been made to the Specification to clarify the description of the invention with the edrawings and to delete numbers not shown in the drawings. The amendment to paragraph 0058 is to clarify that the guide walls of the corner guides 200 engage with the corners of the spreader beam 140 as is shown in Figs. 4 and 5. No new matter has been added.

Claims 3 and 6 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite. These claims have been amended and should now be definite such that the rejection under 35 U.S.C. 112 should be withdrawn.

Claims 1 and 2 have been rejected under 35 U.S.C. 103(a) as being obvious over the primary reference to Toda, Japanese Patent JP07-172317A when considered in view of the teachings of US Patents 3,513,999 to Schwartz et al and 4,043,285 to Nordstrom. Claims 3-9 have been rejected under 35 U.S.C. 103(a) as being obvious over the three previous references when further considered in view of the teachings Japanese Patent JP 60-093006A to Kurosaki. Claims 10 and 11 have been rejected under 35 U.S.C.

103(a) as being obvious over the four previous references when further considered in view of the teachings of German Patent 3103162 to Nichtnennung. Claims 12 and 13 have been rejected as being obvious over the four references cited against claims 3-9 as well as the additional teachings of US Patent 6,220,173 to Sauerwein. For the reasons discussed below, reconsideration of the art rejections of the claims is respectfully requested.

Claims 14-17 have been canceled without prejudice, claims 1, 2-9 and 11-13 have been amended and new claims 18-24 added. No additional claim fees are believed due, however, should fees be due, they may be charged to Deposit Account 04-1577.

The primary reference to Toda has been considered together with the teachings of the secondary references. It is respectfully submitted, however, that it would not be obvious to combine the teachings of the references as suggested as there is nothing in the references themselves that suggests the combinations proposed. Toda discloses a material handling system that includes a grid track system having parallel sets of transverse track sections 2,3 and 4,5 on which a ring rail 7 is movably mounted by four carriage assemblies 14. In order to permit the ring rail 7 to be movable along both sets of transverse track sections, at each track intersection, there is

provided a rotatable track section 13 that must be separately pivoted. Such rotatable track sections must be provided at every intersection within the grid track system. Therefore, to permit a change in direction of the ring rail, four such rotatable track sections must be activated and these sections must carry the full weight of the ring rail, the hoist 10 and any load carried by the hoist. It is not believed that such a structure could support the weight of a loaded conventional 20 or 40 foot international shipping container. It is submitted that the hoist system disclosed is only functional for much lighter loads and thus it would not be obvious to one of ordinary skill in the handling and storage of international shipping containers to modify Toda to incorporate the structures of heavy duty storage and shipping container handling systems.

In this respect, it is not believed that there is anything in the reference or the secondary references which suggests the use of a spreader beam in Toda of a type that could be used to lift and carry a conventional shipping container, the only lifting structure being shown in Toda being a single hoist. It is not believed that it would be obvious to use a spreader beam as taught in the secondary reference to Schwartz et al. Not only is the system shown in Toda not believed to be capable of supporting the weight of international shipping containers, the

hoist 10 and the support rail 9 would have to be restructured to accommodate a spreader beam and such a restructuring is not believed to be an obvious matter.

Further, the vehicle disclosed in Schwartz et al is a land based vehicle and not a suspended lifting mechanism that is movable along an elevated track system. It is submitted that it would not be obvious to carve out portions of the land based vehicle of Schwartz et al to modify an overhead hoist mechanism because there are numerous engineering concerns that are substantially different in the field of overhead transport systems that are different and not addressed in land based systems.

In addition to the foregoing, it is not clear how the system disclosed in the reference could operate using more than one ring rail 7, because, once the rotatable track sections have been rotated, there is no structure disclosed for realigning the rotatable sections to their original position to permit passage of another ring rail in a different direction.

Further, and as the Examiner has noted, Toda does not provide guide members as is claimed with respect to the present invention. As discussed in the present application, it is

important to be able to stabilize and control the movement of a shipping container after it is elevated above the storage cells, especially on board ships where the ship may be pitching based upon sea conditions, see the discussion beginning at paragraph 0053 of the present application. There is nothing in either of the references to Toda or Schwartz et al that even recognize the problem that must be overcome to prevent adverse movement of shipping containers as they are elevated above any guide structure. Without recognizing the problem to be overcome, there is no incentive to modify Toda to include the hydraulic lifts of Schwartz et al. Additionally, the hydraulic cylinder 22 of Schwartz et al and the piston rod associated therewith do not provide the function that is disclosed with respect to the guide members of the present invention. It should be noted that the cylinders of Schwartz et al are actually designed to be **movable omni-directionally** and thus could not prevent undesirable motion of a container being elevated above a stacking cell, see column 2 beginning at line 41 of the reference. Also, claim 7 of the current application further notes that one of the first and second guide members is associated with the spreader frame, which is not the case with the piston rods associated with the hydraulic cylinders of Schwartz et al.

The reference to Nordstrom has been cited as showing columns

and tiers for stacking shipping containers. As set forth above, it is not believed obvious to modify the structure of Toda to create a system for handling international shipping containers. The size and weight of such containers would teach against the modification proposed as the structural details of Toda would have to be modified to achieve an operable system. The single rail 9 and hoist 10 shown in Toda could not function to support or control a spreader beam and shipping container. Thus the combination proposed is not believed to be proper.

The reference to Kurosaki has been cited as showing rack member 12, a drive system including at least one motor 4 and gears 33 together with a track system having first tracks 11 in an "X" direction and second tracks 12 in a "Y" direction. Again, it is not believed that one of ordinary skill in the material handling art would look to modify the Toda system to use the drive mechanisms of Kurosaki. More specifically, in Kurosaki, the drive gears are not mounted to the movable units or platforms 1. Rather, the platforms have gear racks 11 and 12 that are engaged by drive gear 33 and 34 mounted below the platforms. The drive units of Toda must be carried on the hoist device because such drive units must be capable of turning to change direction at the intersections. This cannot be accomplished using the teachings of Kurosaki.

The secondary reference to Nichtnennung has been considered but the gear racks and pinions disclosed therein, even if used in the Toda system, would not overcome the differences between the prior art and the claimed present invention as discussed above. Further, there again is no teaching or suggestion in either reference that the gear and rack system of the German Patent could be used beneficially in the Toda system. The rotatable track sections of Toda would teach away from a rack system as there would be alignment concerns raised for the proper meshing of gears and racks at each intersection of the Toda reference.

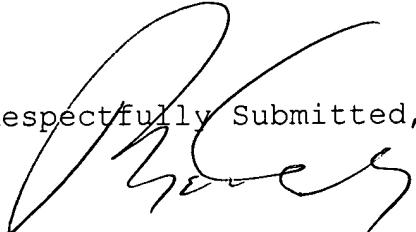
The secondary reference to Sauerwein has been cited as showing an inductive power raceway with a collector shoe 20. Again, the track system of Toda would have to be modified for use with such an inductive power raceway and it is again not clear how such a modification could be made due to the rotatable track sections of Toda. Further, even if one were to combine the teachings of Sauerwein, the differences between the present invention and the combinations discussed above would remain and thus the overall combination of elements, including claims 12 and 13 would not be taught by the prior art.

In view of the foregoing, the cited art does not teach or disclose the structure and operable characteristics of the

present invention nor provide for the operable and structural advantages as discussed in the present application. The present invention provides an overhead system that does not require pivotable track members at the intersections as the intersections are open. Further, one or more transfer vehicles may operate at the same time using the system of the present invention and can operate above any of the storage tiers defined by the cells of the present invention. Additionally the present invention also provides guidance features for controlling the movement of the spreader beams and any containers carried thereby whenever the containers are elevated relative to the storage cells.

Therefore, favorable consideration and allowance of the amended and new claims is respectfully solicited. Should the Examiner have any questions regarding this matter or the allowability of the application, it would be appreciated if the Examiner would contact the undersigned attorney-of-record for purposes of scheduling a personal interview in order to expedite the further prosecution of this application.

Respectfully Submitted,

  
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